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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,278	06/25/2003	John Keeney Howie	9285	4432

27752 7590 10/06/2005

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EXAMINER

HENDRICKS, KEITH D

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,278

Applicant(s)

HOWIE ET AL.

Examiner

Keith Hendricks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 22, 2005 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-13 and 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "reduced... when compared to conventionally processed cocoa beans", is a relative term which renders the claims indefinite. The terms "reduced", as well as "conventionally processed", are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Applicant's arguments filed July 22, 2005 have been considered, but are not deemed persuasive. Applicant states that because the phrase "reduced", with respect to the level of asparagine in the cocoa beans, has been amended to state that this is being "compared to conventionally processed cocoa beans", that the rejection is overcome. This is not deemed persuasive. One skilled in the art would not be apprised of how much asparagine or acrylamide is contained in "conventionally processed" cocoa beans. This varies not only from species to species of cocoa, commercial brand to brand, but also even from one roast to another within the

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same batch of beans. Thus, there is no standard set forth by which one skilled in the art would be able to determine this amount and therefore carry out the invention. It is noted that at the top of page 22, prior to the examples, the specification states that regarding the beans processed by an asparagine-reducing enzyme, "the control sample is prepared in exactly the same manner as the enzyme-treated sample, with the exception that enzyme is not added", and the comparison is made against this standard. It is suggested that this language be adopted for the claims, as well. It provides a readily-obtainable standard to utilize when assessing and producing the claimed invention.

As previously stated on the record, the term "reduced" indicates both a current condition and a previous condition, as well as a change from the previous to the current state. A product, as it stands in its current state, cannot simply be "reduced", without reference to a standard or to the previous condition. Further, as an example, if two distinct roasted cocoa beans each contain 350 ppb of acrylamide, where one naturally contained said amount and one had been processed according to the invention, given this data alone, it would be impossible for one skilled in the art to determine which one had been "reduced" from a previously higher amount, and which one was naturally at this level. Still further, it is noted that a roasted cocoa bean cannot have a "reduced amount of acrylamide", if it never had a previous level of acrylamide, as is the case with cocoa beans which have not yet been roasted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 3-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Elder et al. (Pub. No. US 2004/0058054). The reference and rejection are taken as cited in a previous Office action.

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Applicant's arguments filed July 22, 2005, have been fully considered but they are not persuasive.

At page 7 of the response, applicant states that "there is no suggestion or motivation to modify the reference." This is not deemed persuasive for the reasons of record. It is maintained that, as opposed to actually "modifying the reference", there is nothing within the reference necessary to actually modify. Rather, one of ordinary skill in the art need only follow the specific teachings and suggestions set forth within the reference, in order to arrive at the claimed invention. The reference teaches the application of asparaginase, which is an "asparagine-reducing enzyme", to foodstuffs, and specifically recites cocoa beans and cocoa products as such sample foodstuffs. Applicant urges that "at no time does Elder specifically teach how to reduce acrylamide in cocoa or cocoa beans." This is not deemed persuasive. Applicant appears to be questioning the enablement and disclosure of a United States published patent application, and further, questioning the very crux of the entire publication set forth therein. This is not deemed persuasive, as has been set forth in the reasons previously of record. The reference clearly sets forth how one of ordinary skill is to carry out the method and arrive at the resultant products, and it would not have involved an inventive step for such an artisan to carry out the specific teachings contained therein.

At pages 7-8 of the response, applicant states that "there is no reasonable expectation of success as Elder fails to teach a method for acrylamide reduction in cocoa beans." Applicant states that the reference "fails to provide any practical teachings relating" to such reduction, in part because the examples of the reference carry out the stated reactions in test tubes. This is not deemed persuasive. Contrary to what applicant states, it is unclear as to how one of ordinary skill in the art could read the reference, and with even a moderate level of understanding of the art, *not* come away with the concepts and specific direction detailed by Elder et al. Food products are simply chemical compositions, just as are the test compositions utilized and disclosed by the reference. The exemplified compositions are clearly sufficient to be indicative and representative of other compositions also containing asparagine, such as known food compositions. Further, as quoted previously from the reference regarding the examples, "*this experiment establishes that reducing the concentration of asparagine, or the reactive nature or* ['of'; sic] *asparagine, will reduce acrylamide formation.*" Thus, this direct teaching, suggestion

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and actual example set forth in the reference, would clearly provide the necessary motivation, guidance and reasonable expectation of success to the ordinarily-skilled artisan in order to utilize the protocol with the specifically-recited food items, including cocoa beans, absent any clear and/or convincing arguments to the contrary. The reference did not recite cocoa beans as possessing asparagine/acrylamide for some random other purpose. In fact, it is unclear as to what different or contrary conclusions might be drawn from the teachings of the reference. One of ordinary skill in the art would readily know and understand this simple concept, and thus applicant's arguments otherwise are not well supported.

Further to this point, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., any actual specific means to carry out the claimed invention) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is important to note that applicant's claims merely recite the simple, single general step of "adding an asparagine-reducing enzyme to the cocoa beans." This is far less information than that provided by the reference. If applicant feels that in order to carry out this method, more complex techniques and protocols are necessary, then it is unclear as to how they can allege that the reference does not teach and enable such methods, and yet the instant claims are somehow adequate. Applicant's arguments are not commensurate in scope with the claimed invention.

Finally, at pages 8-9 of the response, applicant states that "there is no teaching of all the claim limitations", more particularly, that because the reference did not provide a specific example of the reduction of acrylamide formation in cocoa beans, that applicants assert that this "does not amount to teaching the present invention, which describes a specific method to reduce acrylamide in cocoa and cocoa products." This is not deemed persuasive for the reasons of record. It is noted that the test for obviousness is not whether the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the reference(s) would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Despite the fact that the reference discloses a method for reducing the amount of acrylamide in thermally processed foods, and

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despite the fact that the reference specifically states that roasted (i.e. thermally processed) cocoa beans tested positive for acrylamide, and finally, despite the fact that the reference specifically states that “one such method for inactivating [asparagine] is to contact asparagine with the enzyme asparaginase”, somehow applicant still alleges that there is no suggestion or motivation in the reference for one of ordinary skill in the art to reduce the level of asparagine – and thus the level of acrylamide in roasted cocoa beans – by adding asparaginase to cocoa beans. This is simply not deemed persuasive, and appears to fly in the face of the teachings and spirit of the reference. Again, the reference did not recite cocoa beans as possessing asparagine/acrylamide for some random other purpose, as applicant appears to be implying. As stated previously on the record, the reference clearly and unambiguously suggests to one of ordinary skill in the art, the instantly-claimed method of utilizing an asparaginase enzyme for inactivating asparagine in cocoa beans, thereby reducing the level of acrylamide which would be formed in the subsequently roasted cocoa beans. The reference leaves no question as to whether this would prove successful with regard to the recited food products, as this is the primary purpose and goal of the reference.

From that stated previously on the record: Regarding claims 17-18, it would have been obvious to one of ordinary skill in the art to have packaged and appropriately labeled the food products produced by Elder et al. Packaging and labeling techniques were well-known and common in the art, especially regarding any potential special feature that might draw the interest of the consumer. Regarding the particular message, it is noted that the printed word itself would not significantly change the claimed article of matter, and would not provide a patentable distinction, *per se*, over the known prior art package materials and methods. It is recognized, however, that if eventually the instant product claims directed to the food materials with “reduced levels of asparagine [or acrylamide]” were to be found allowable over the prior art, then the article container claims 17-18 would also be allowable, if reasonably commensurate in scope.

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Conclusion

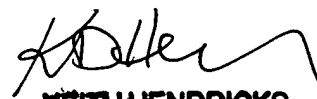
This is an RCE continuation of applicant's earlier Application No. 10/603,278. **All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application.** Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (571) 272-1401. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KEITH HENDRICKS
PRIMARY EXAMINER